

REMARKS

Initially, Applicants would like to express their appreciation to the Examiner for the detailed Official Action provided.

Applicants submit that the instant amendment is proper for entry after final rejection. Applicants note that no question of new matter or any new issues are raised by entry of the instant amendment of the claims, and that no new search would be required.

Moreover, Applicants submit that the instant amendment places the application in condition for allowance.

Accordingly, Applicants request that the Examiner enter the instant amendment, consider the merits of the same, and indicate the allowability of the present application and each of the pending claims.

Upon entry of the above amendments, claim 21 will have been amended. Claims 1-20 and 28-35 have been withdrawn from consideration as directed to a non-elected invention. Applicants allow the withdrawn claims to remain pending, i.e., subject to possible rejoinder.

Applicants respectfully request reconsideration of the rejections, and allowance of all the claims pending in the present application.

Rejection Under 35 U.S.C. §102 and 103

In the Official Action, the Examiner rejected claims 21 and 23-26 under 35 U.S.C. § 102 as being anticipated by OKUNO et al. (U.S. Patent No. 5,338,008); and

the Examiner rejected claim 27 under 35 U.S.C. § 103(a) as being unpatentable over OKUNO in view of CAMPBELL (U.S. Patent No. 4,334,646).

Without acquiescing to the propriety of the Examiner's rejections, Applicants have amended claim 21 solely in order to expedite prosecution of the present Application.

In particular, claim 21 sets forth a solder bump forming apparatus including: a heating device is provided for heating the solder composite from a first side of the substrate, wherein the heating device blows hot air, and wherein the blowing hot air of the heating device does not directly come in contact with the solder composition on the substrate within a space through which the substrate is conveyed; and a thermostat device for controlling a temperature of the solder composition is provided at a position above a mount plate, which is located over a second side of the substrate, wherein the thermostat device includes a system in which a cool air or hot air of the thermostat device does not directly come in contact with the solder composition on the substrate within the space.

In setting forth the above rejections, the Examiner has characterized the air within the space in which the fan 20 is provided as being equivalent to the presently claimed cool air and hot air that *does not* directly come in contact with the solder composition on the substrate (see the first full paragraph on page 4 of the Official Action). Furthermore, the Examiner indicates that the surface blowing heater 3 is equivalent to the presently claimed heating device.

Contrary to the Examiner's assertions, Applicants submit that the devices of the applied prior art are structurally very different from the presently claimed invention.

In particular, Applicants submit that OKUNO discloses that “[a] surface-blowing heater 3 is one in which a hot blowing port 4 and a gas-drawing port 5 are provided in the same plane, a fan 6 provided within the heater draws in gas through the gas-drawing port 5, and this **gas is heated by a series of electric heaters 7 so that the heated hot gas is blown through the hot blowing port 4.**” **Emphasis Added. (See column 4, lines 7-13, in OKUNO).**

In this regard, Applicants submit that (in OKUNO) it is clear that at least a portion of the hot air that passes over the heater comes into direct contact with the substrate (see, e.g., the arrows in Figure 2 of OKUNO indicating the flow of hot air). In other words, Applicants submit that the composition (and substrate), as it is conveyed through the space in OKUNO, will be directly exposed to at least some of the gas heated by the heating element 7 of the heating device 3.

Thus, Applicants submit that OKUNO, alone or in any properly reasoned combination, fails to disclose at least the presently claimed blowing hot air of the heating device not directly coming in contact with the solder composition on the substrate within a space through which the substrate is conveyed; and ... a cool air or hot air of the thermostat device not directly coming in contact with the solder composition on the substrate within the space, as generally recited in amended claim 21.

Further, Applicants submit that CAMPBELL does not disclose anything that can reasonably be considered to supply the above-discussed deficiencies in OKUNO.

Accordingly, Applicants submit that the rejections of claims 21 and 23-27 under 35 U.S.C. § 102 and 103 are improper and should be withdrawn.

In view of the remarks herein-contained, Applicants submit that independent claim 21 is in condition for allowance. With regard to dependent claims 23-27, Applicants assert that they are allowable on their own merit, as well as because of their dependencies from independent claim 21, which Applicants have shown to be allowable.

Thus, it is respectfully submitted that all of the claims in the present application are clearly patentable over the references cited by the Examiner, either alone or in combination, and an indication to such effect is respectfully requested, in due course.

SUMMARY

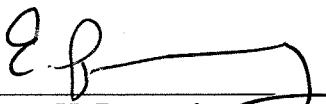
Applicants submit that the present application is in condition for allowance, and respectfully requests an indication to that effect. Applicants have argued the allowability of the claims and pointed out deficiencies of the applied references. Accordingly, reconsideration of the outstanding Official Action and allowance of the present application and all the claims therein are respectfully requested and is now believed to be appropriate.

Applicants note the status of the present application as being an after final rejection and with respect to such status believes that there is a clear basis for the entry of the present amendment consistent with 37 C.F.R. § 1.116. Applicants note amendments after final are not entered as a matter of right; however, Applicants submit that the present amendment does not raise new issues or the question of new matter.

Applicants note that this amendment is being made to advance prosecution of the application to allowance, and should not be considered as surrendering equivalents of the territory between the claims prior to the present amendment and the amended claims. Further, no acquiescence as to the propriety of the Examiner's rejection is made by the present amendment. All other amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability.

Should the Examiner have any questions, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
Masaru SHIRAI et al.


Bruce H. Bernstein
Reg. No. 29,027

August 30, 2010
GREENBLUM & BERNSTEIN, P.L.C.
1941 Roland Clarke Place
Reston, VA 20191
(703) 716-1191

Enoch E. Peavey
Reg. No. 57,686